



# **Section B:1**

## ***Waste Management***

### **PROJECT MANAGERS**

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## SUMMARY

Waste Management consists of the Solid Waste Storage and Disposal, Project Baseline Summary (PBS) WM03, Work Breakdown Structure (WBS) 1.2.1; Solid Waste Treatment, PBS WM04, WBS 1.2.2; Liquid Effluents - 200 Area, PBS WM05, WBS 1.2.3.1; and the Waste Encapsulation and Storage Facility, PBS TP02, WBS 1.4.2.

PBS WM05 is divided between WBS 1.2.3.1, Liquid Effluents (200 LEF) and WBS 1.2.3.2, 310 TEDF/340 Facility (300 LEF). The 310 TEDF/340 Facility work scope is included in the River Corridor Project, whereas the Liquid Effluents (200 LEF) work scope remains in Waste Management. For the purpose of performance analysis, PBS WM05 is reported in its entirety in the Waste Management Project (WMP), which has the majority of the work scope and funding.

Fiscal-year-to-date milestone performance (EA, DOE-HQ, RL) shows one of one milestones (100 percent) completed early. In addition, Tri-Party Agreement milestone, M-91-12, "Initiate Thermal Treatment of Contact-Handled — Low Level Mixed Waste (CH-LLMW)," is in dispute between RL and Ecology.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of February 28, 2001. Other data is updated as noted.

## NOTABLE ACCOMPLISHMENTS

**Mixed Low Level Waste (MLLW) Treatment/Disposal** - Since the last report, 105 cubic meters (m<sup>3</sup>) of MLLW debris and 15 m<sup>3</sup> of thermally treatable waste were shipped to ATG, Inc. for treatment. Thirteen boxes of macro-encapsulated debris (totaling 130 m<sup>3</sup> of treated waste) were also received at the Mixed Waste Trench (MWT) during this period. To date, ATG has fed approximately 10,000 lbs (~35 drums) of the granulated activated carbon (GAC) and ~2,200 lbs (6 drums) into its GASVIT<sup>®</sup> unit. ATG is drafting the waste profiles for the returned treatment residues from the system (glass and stabilized sludge/particulate).

A macroencapsulated AW-104 pump was accepted and disposed in the MWT from CH2M HILL Hanford Group (CHG). The Waste Management Project (WMP) worked closely with CHG early in the planning phases of the AW-104 pump project to make sure all waste acceptance requirements would be in order when the waste package was ready for shipment to the MWT.

**Transuranic Waste Retrieval** – The Preliminary Hazard Analysis for the Transuranic (TRU) Retrieval Authorization Basis is complete. The Authorization Basis (AB) criteria document was transmitted to RL for approval.

**Transuranic Waste Processing** – Fiscal Year to Date (FYTD) production through February 28, 2001: 418 Nondestructive Examination (NDE), 409 Nondestructive Assay (NDA), 114 Headspace Gas Analysis, 38 Glove box Repackaging, 2 Visual Examinations, 35.2 m<sup>3</sup> certified for shipment, and 16.8 m<sup>3</sup> shipped to the Waste Isolation Pilot Plant (WIPP). Through March 13, 2001, 53 previously assayed TRU drums have been shipped from Trench 29 to the Central Waste Complex (CWC). WMP is on schedule for the next waste shipment to WIPP on March 29, 2001.

**Liquid Waste Processing** – The 242-A Campaign 2001-01 began on Tuesday, March 13, 2001. The evaporator was started up on schedule despite a number of challenges. Fluor Hanford (FH) and CHG successfully worked together to make the start of this campaign happen. Completing this campaign is crucial in that it will allow CHG to move forward more rapidly with this year's construction efforts in the tank farms. The campaign was completed on Thursday, March 29, 2001, including completion of the flush and facility layout.

From October 1, 2000 through February 28, 2001, 14 million gallons of wastewater were processed through the 200 Effluent Treatment Facility supporting the Environmental Restoration Contractor 200-UP-1 Groundwater treatment.

**Support to Nuclear Material Stabilization (NMS) Project** - Rocky Flats ash processing was completed. Routine shipments of pipe overpack drums continue. The Waste Management Project (WMP) received 69 drums containing Rocky Flats ash from the Plutonium Finishing Plant (PFP) in the first two weeks of March, bringing the total number of pipe overpacks received to 246.

**Support to River Corridor Project** – WMP support of the River Corridor Project Tri-Party Agreement milestone (M-89-02, due March 31, 2001) continued with shipping and receipt of waste in 22-ton steel boxes from the 324 building. Issues were encountered with the last box packaged from the cell in that the dose rates for the box exceed the acceptance criteria and the Authorization Basis (AB) for the CWC. A resolution was reached wherein the box can be accepted at CWC and then placed into a vault for storage and shielding.

**Accelerate Readiness to Receive Spent Nuclear Fuel K Basin Sludge** - Three deck sections have been cleared at T Plant and significant process has been completed on additional deck sections. The de-posting of the T Plant canyon as a high radiation area was completed March 16, 2001. The K Basins sludge storage National Environmental Policy Act (NEPA) environmental assessment was approved by the RL NEPA document review panel, and will be issued shortly for a 30 day review by stakeholders and tribes.

## SAFETY

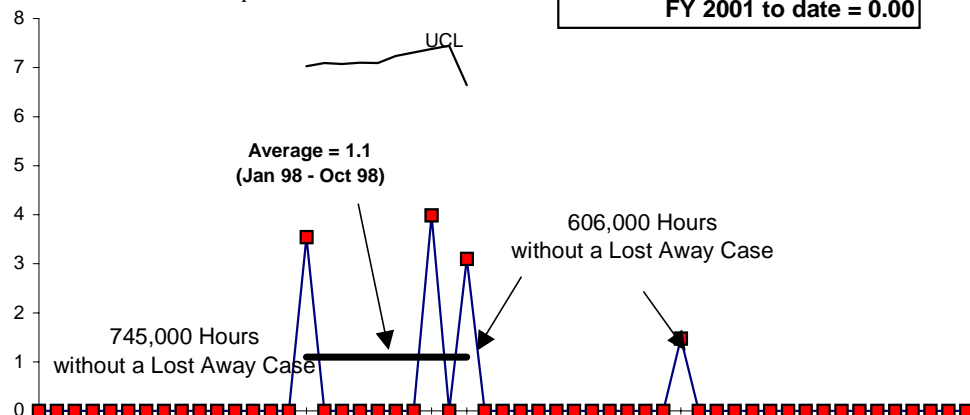
WMP achieved 2 million hours without a lost away workday in February 2001. In February there was one OSHA recordable case, no Restricted Workday Cases and one First Aid Case. Over the past year, the lost/restricted workday case rate and OSHA recordable case rate have shown significant decreases.

### Lost Away Workday Case Rate

Cases per 200,000 hours

Project Safe Hours = 2,032,097  
FY 2000 = 0.13  
FY 2001 to date = 0.00

Green

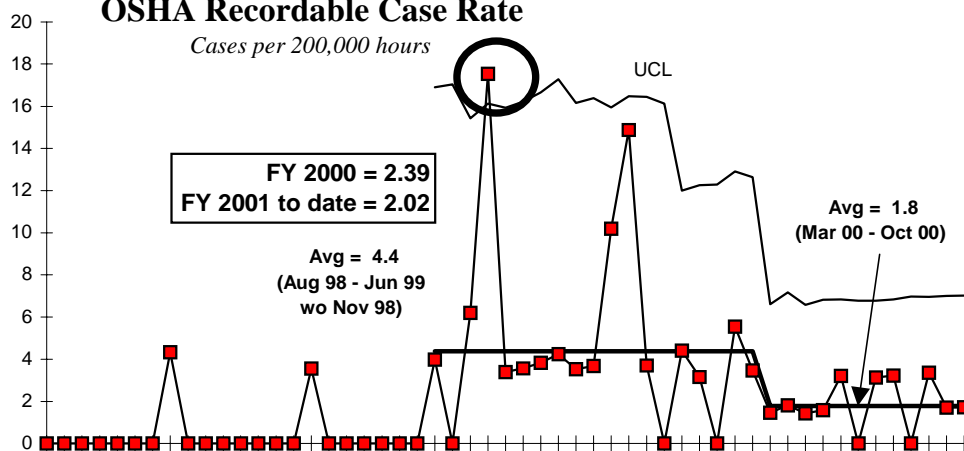


### OSHA Recordable Case Rate

Cases per 200,000 hours

FY 2000 = 2.39  
FY 2001 to date = 2.02

Green

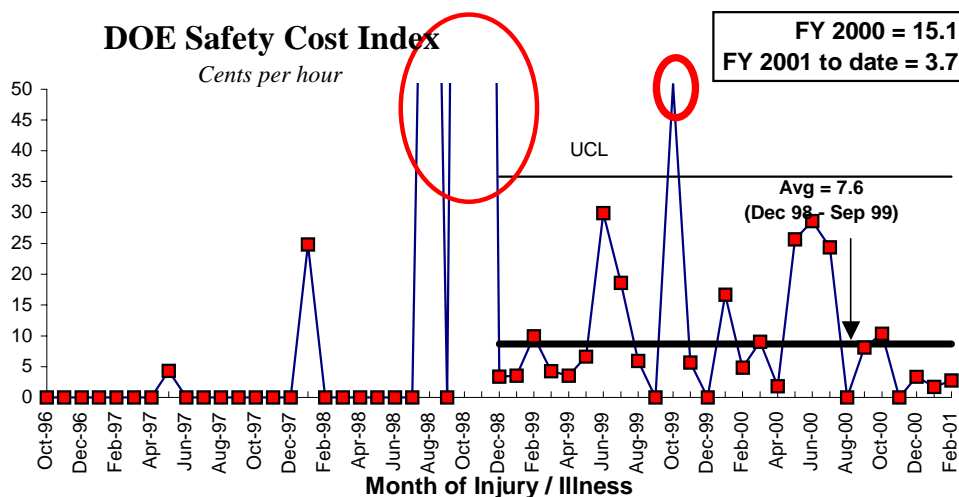


### DOE Safety Cost Index

Cents per hour

FY 2000 = 15.1  
FY 2001 to date = 3.7

Green



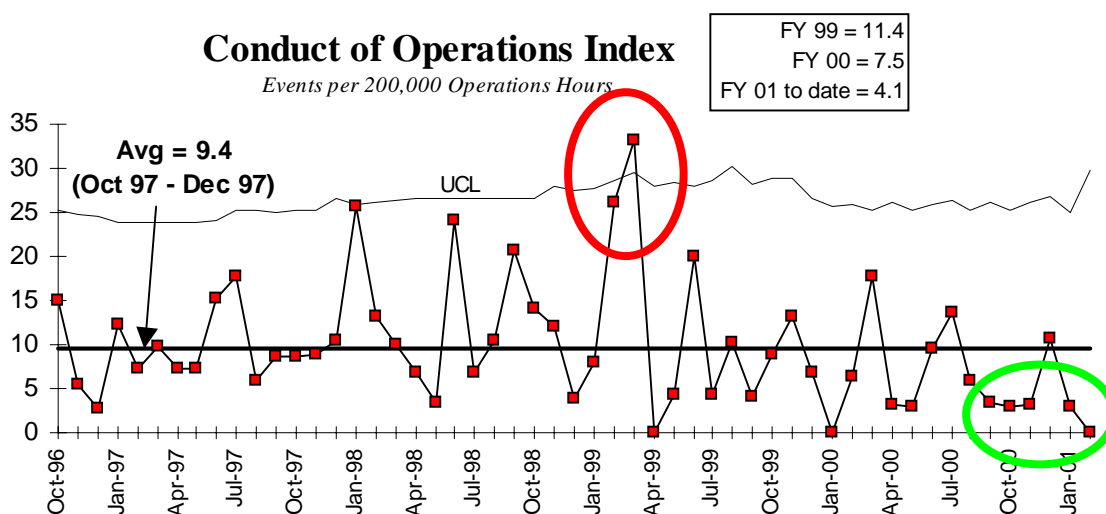
## ISMS STATUS

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- The WMP Facility Evaluation Board (FEB) assessment was performed and the draft final report issued. Appendix A of the report details the condition of the Project's integration of management systems, stating "WMP continues to adequately implement their ISMS as required by DOE policies and the related safety management DOE Acquisition Regulation (DEAR) clauses and as described in the FH ISMS Maintaining and Sustaining Plan." The draft report identifies a number of opportunities for improvement.

## CONDUCT OF OPERATIONS

Green



## BREAKTHROUGHS / OPPORTUNITIES FOR IMPROVEMENT

### Breakthroughs

Nothing to report at this time.

### Opportunities for Improvement

- **Mixed Waste Focus Area** — Waste Management continues to work with the Mixed Waste Focus Area (Robotics Product Line) on a technology development / demonstration activity at Hanford. The proposals for the Remote Sizing solicitation support T Plant deck clearing and waste processing activities under the M-91 Tri-Party Agreement milestones. Technical reviews of the proposals were completed in February. Bids will be awarded in April with implementation as soon as May/June of 2001.
- **WESF Basis for Interim Operations (BIO)** — The Waste Encapsulation Storage Facility (WESF) rapid loss of pool cell water accident and associated controls are being evaluated in depth and will be documented in a revision to the WESF BIO. A reduction in the minimum staffing requirement is expected from this analysis and BIO revision. An Engineering Change Notice (ECN) has been submitted to RL for approval to change the required response time to a low water level condition from one hour to 48 hours.

## UPCOMING ACTIVITIES

**TRU Waste Shipment** – The next shipment to WIPP remains scheduled for March 29, 2001. The Certification Official and Transportation Certification Official are working to complete final certifications. Additional shipments are scheduled for May and July.

**Nuclear Material Stabilization Support** - The balance of the 299 pipe overpack containers are to be shipped to the CWC by the end of March. Processing and shipment of Hanford ash is scheduled to commence in early April.

**Liquid Waste Processing** – Groundwater processing will resume in April 2001 following completion of the 242-A Evaporator campaign and maintenance outages.

**TRU Waste Retrieval** – The list of uncovered drums to be retrieved for 218-W-4C, Trench 20 is being reviewed for criticality requirements. Upon completion of the review, WMP will be ready to remove the drums from the stack beginning in early April. The retrieval drum list for 218-W-4C, Trench 1 is also in preparation.

**Environmental Assessment (EA) for new Low Level Burial Ground (LLBG) Trenches** - An EA to support construction of four new trenches in the LLBG was issued for public comment. The new trenches are proposed to be constructed within the existing foot print of the LLBG, and are needed to support forecasted waste receipts and to support segregation of Category I and Category III low-level waste. The public comment period ends March 30, 2001, and a final DOE/RL NEPA Panel Review is scheduled for April 10, 2001.

**DNFSB Recommendation 2000-2** - Complete the Phase 1 assessment required to implement DNFSB Recommendation 2000-2 at the Waste Encapsulation and Storage Facility (WESF) in late April 2001. This assessment will focus on the reliability of vital safety systems (VSS) operations and is concerned with the degradation of VSS and capability to apply engineering expertise to maintain the configuration of these systems.

**TRU Recertification Audit** – The Hanford TRU recertification audit is scheduled for the week of June 11, 2001 and will include the Plutonium Finishing Plant (PFP) NDA and Visual Examination (VE) technique.

**Land Disposal Restriction (LDR) Report** - The CY 2000 LDR report is on schedule for issuance by June 30, 2001. Upcoming activities include an advance review of the Potential Mixed Waste Table and approximately 700 pages of waste stream data sheets by Ecology and a site-wide review of the complete report. [See also Regulatory Issue on page 14.]

**Accelerate Readiness to Receive Spent Nuclear Fuel K Basin Sludge** – By September 30, 2001, complete 1) clearing of 10 sections of the T Plant deck, 2) complete safety basis documentation and install long-lead procurements, 3) install handling, drying and loading equipment, and (4) initiate contractor readiness activities.

## MILESTONE ACHIEVEMENT

Green

MILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			TOTAL FY 2001
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	1	0	0	0	0	2	0	3
DOE-HQ	0	0	0	0	0	0	0	0
RL	0	0	0	0	0	0	0	0
<b>Total Project</b>	1	0	0	0	0	2	0	3

Tri-Party Agreement milestone, M-91-12, "Initiate Thermal Treatment of Contact-Handled — Low Level Mixed Waste (CH-LLMW)," is in dispute between RL and Ecology, and has been removed from the above chart.

Only TPA/EA milestones and all FY2001 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2001 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY 2002 TPA/EA milestones.

FY 2001 Tri-Party Agreement / EA Milestones		
Number	Milestone Title	Status
M-91-12 (A2G-01-104)	Initiate Thermal Treatment of CH-LLMW	Due 12/31/00 – Ecology has been notified that RL has invoked the Dispute Provision of the Tri-Party Agreement relative to completion of this milestone. WMP has supported RL preparation of the dispute response.

Yellow

M-91-13 (A1C-01-001)	Initiate Disposal of CH-LLMW	Due 06/30/01 – Completed 9/15/1999	Green
M-91-18 (WMP-01-001)	Transmit T-Plant Sludge Storage Conceptual Design to Ecology	Due 06/29/01 – On Schedule	Green
M-26-05H (WMH-00-006)	Prep Biennial Tritium Treatment Technology Evaluation report	Due 08/31/01 – On Schedule	Green
DNFSB Commitments			
Nothing to report at this time.			

## MILESTONE EXCEPTION REPORT

<u>Number/WBS</u>	<u>Level</u>	<u>Milestone Title</u>	<u>Baseline Date</u>	<u>Forecast Date</u>
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Overdue – 0

Forecast Late – 0

FY 2000 Overdue – 0

FY 1999 Overdue – 1

TRP-98-709	RL	Complete Hot Cell Deactivation WESF Facility (A-E)	03/31/99	09/30/01
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**Cause:** This milestone is not complete due to not being supported at the current funding level.

**Impact:** No overall impact is expected.

**Corrective Action:** Funding for this work scope [Return-on-Investment (ROI)] has been identified and a new forecasted completion date of September 30, 2001 established.

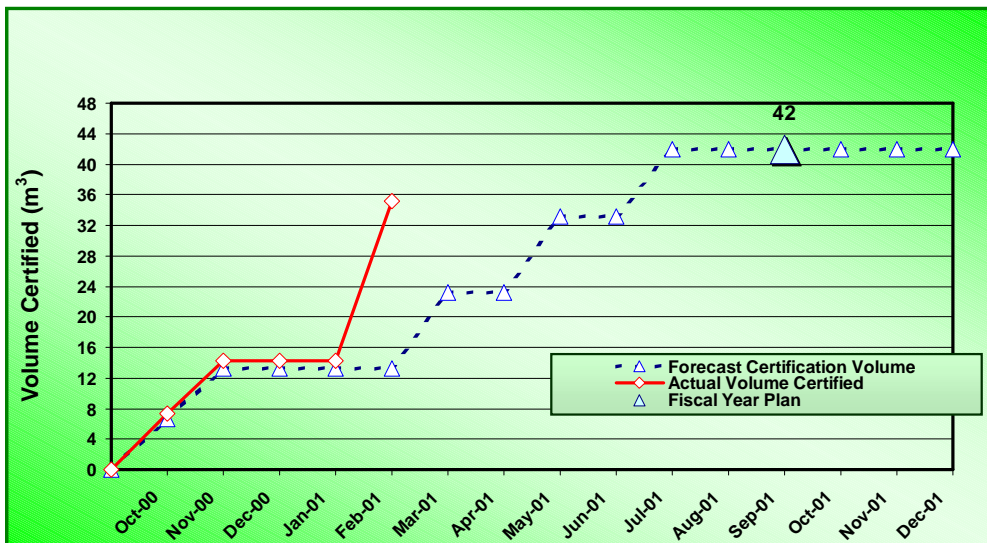
FY 2002 Tri-Party Agreement / EA Milestones		
Number	Milestone Title	Status
	Nothing to report at this time.	
DNFSB Commitments		
	Nothing to report at this time.	



## PERFORMANCE OBJECTIVES

### TRU Waste Certified

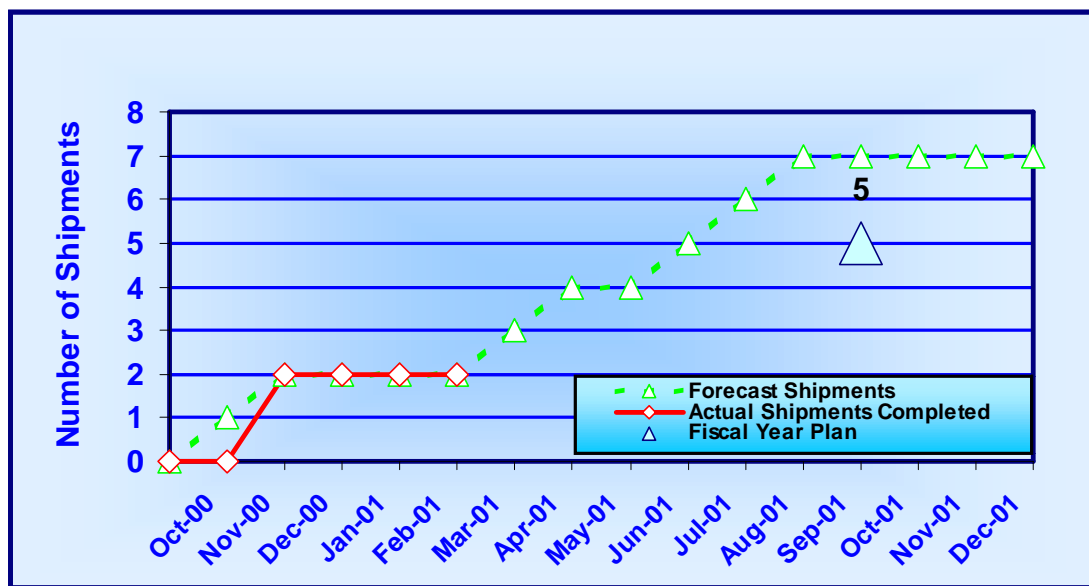
Green



Ahead of schedule. Current forecast is to complete 60 m<sup>3</sup> by September 2001.

Green

### TRU Waste Shipped



On schedule for the next shipment in late March 2001. Current forecast is to complete 7 shipments by September 2001.

## Retrieve TRU Waste

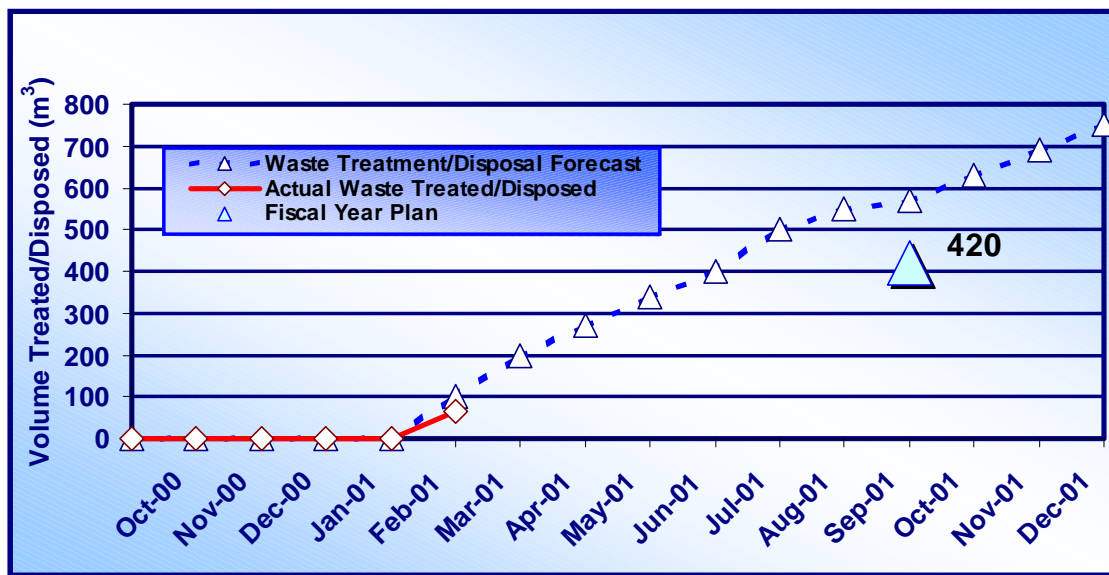
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TRU RETRIEVAL												
FY 01 SCHEDULED ACTIVITIES												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Exposed Drum Retrieval												
Buried Drum Retrieval												
A B Development												
Procedures & Training												
Environmental Documents												
Contractor Readiness Review												

On schedule.

## Treat and Dispose Mixed Low Level Waste

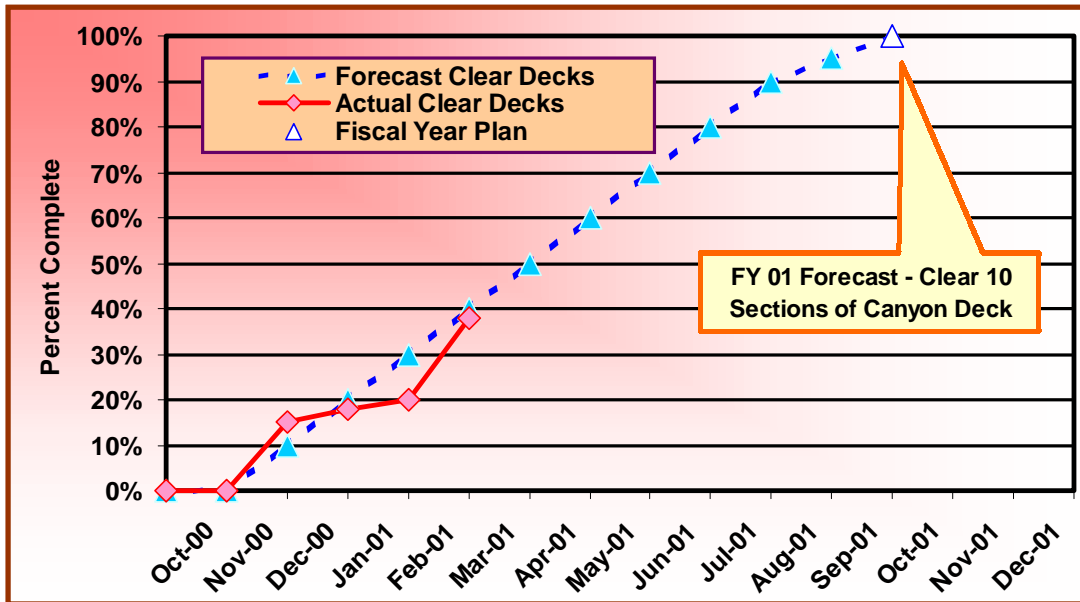
Green



On schedule. Since the last report, 105 cubic meters (m<sup>3</sup>) of MLLW debris and 15 m<sup>3</sup> of thermally treatable waste were shipped to ATG, Inc. for treatment. Thirteen boxes of macro-encapsulated debris (totaling 130 m<sup>3</sup> of treated waste) were also received at the Mixed Waste Trench (MWT) during this period. Revision 1 of Performance-Based Incentive M-5 redefines the completion expectation.

## T Plant Deck Clearing

Green



On schedule. To date, three decks have been cleared and significant progress has been completed on additional decks. Currently completing a detailed materials and equipment inventory to support Performance-Based Incentive (PBI) completion requirements.

## Fuel Removal Readiness

Yellow

ID	Task Name	Fiscal Year	2000				2001				2002			
			Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	<b>PWR FUEL</b>													
2	<b>SAFETY DOCUMENTS</b>	2/2				230 days		1/8						
3	<b>READINESS</b>						12/29				11/9			
4	<b>SHIP FUEL</b>										11/12			4/2
5														

Continue approximately two weeks behind the May 7, 2001 schedule for management self-assessment (preparatory to Contractor Readiness Assessment) due to safety assessment issue resolution and Interim Safety Basis (ISB) resolution activities. Currently approximately 290 of 330 RL comments have been resolved. Recovery is expected by April 15, 2001.

## FY 2001 SCHEDULE / COST PERFORMANCE – ALL FUND TYPES CUMULATIVE TO DATE STATUS – (\$000)

Green

		FYTD									
	By PBS	BCWS	BCWP	ACWP	SV	%	CV	%	PEM	EAC	
PBS WM03 WBS 1.2.1	Solid Waste Storage & Disposal	\$ 9,897	\$ 9,614	\$ 9,159	\$ (283)	-3%	\$ 455	5%	\$ 25,206	\$ 24,625	
PBS WM04 WBS 1.2.2	Solid Waste Treatment	\$ 14,093	\$ 14,726	\$ 14,554	\$ 633	4%	\$ 173	1%	\$ 38,810	\$ 39,709	
PBS WM05 WBS 1.2.3	Liquid Effluents - 200/300 Area	\$ 10,884	\$ 11,289	\$ 9,381	\$ 405	4%	\$ 1,908	17%	\$ 27,465	\$ 25,918	
PBS TP02 WBS 1.4.2	WESF	\$ 4,306	\$ 4,311	\$ 4,258	\$ 5	0%	\$ 52	1%	\$ 11,451	\$ 11,542	
Total		\$ 39,180	\$ 39,940	\$ 37,352	\$ 760	2%	\$ 2,588	6%	\$ 102,932	\$ 101,794	

Authorized baseline as per the Integrated Planning Accountability, and Budget System (IPABS) – Project Execution Module (PEM).  
Note: Above data includes RL contract for Steam.

## FY TO DATE SCHEDULE / COST PERFORMANCE

Cost and schedule variances for the Waste Management Project are within established thresholds.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

### Schedule Variance Analysis: (+\$0.8M)

#### Solid Waste Storage & Disposal — 1.2.1/ WM03

**Description /Cause:** The unfavorable schedule variance of \$0.3M (3 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

#### Solid Waste Treatment — 1.2.2/ WM04

**Description /Cause:** The favorable schedule variance of \$0.6M (4 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

#### Liquid Effluents — 1.2.3.1/ WM05

**Description /Cause:** The favorable schedule variance of \$0.4M (4 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

**WESF — 1.4.2/ TP02**

**Description /Cause:** The favorable schedule variance of \$0 (0 percent) was within the established threshold.

**Impact:** No Impact.

**Corrective Action:** No corrective action required.

## Cost Variance Analysis: (+ \$2.6M)

**Solid Waste Storage & Disposal — 1.2.1/WM03**

**Description/Cause:** The favorable cost variance of \$0.5M (5 percent) was within the established threshold.

**Impact:** No impact.

**Corrective Action:** No corrective action required.

**Solid Waste Treatment — 1.2.2/WM04**

**Description/Cause:** The favorable cost variance of \$0.2M (1 percent) was within the established threshold.

**Impact:** No impact.

**Corrective Action:** No corrective action required.

**Liquid Effluents — 1.2.3.1/WM05**

**Description/Cause:** The favorable cost variance of \$1.9M (17 percent) was primarily due to vacancies, staff on leave, and reduced sample analysis.

**Impact:** No impact.

**Corrective Action:** The underruns will be used to fund TRU retrieval.

**WESF — 1.4.2/TP02**

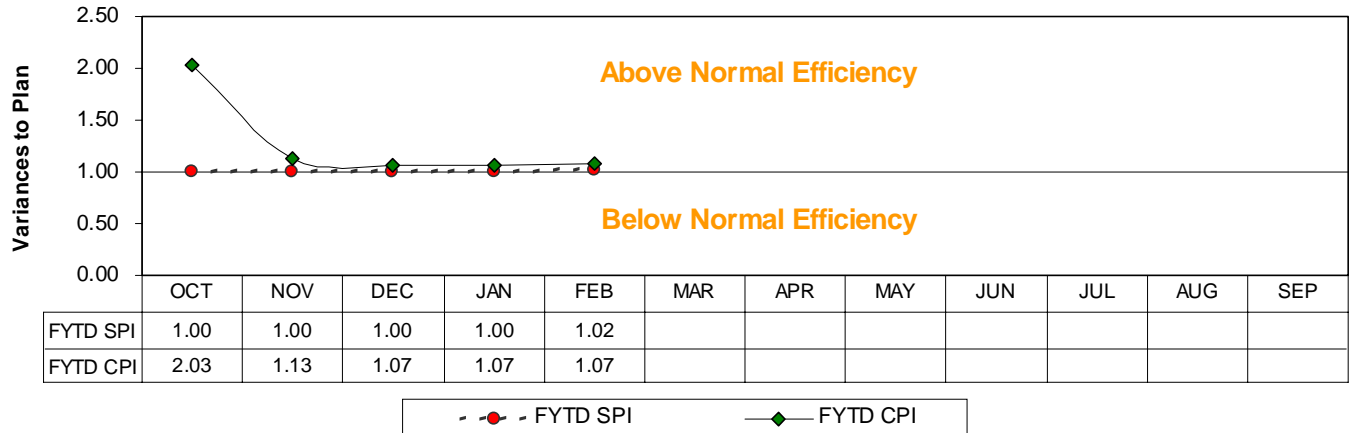
**Description/Cause:** The favorable cost variance of \$0.05M (1 percent) was within the established threshold.

**Impact:** No impact.

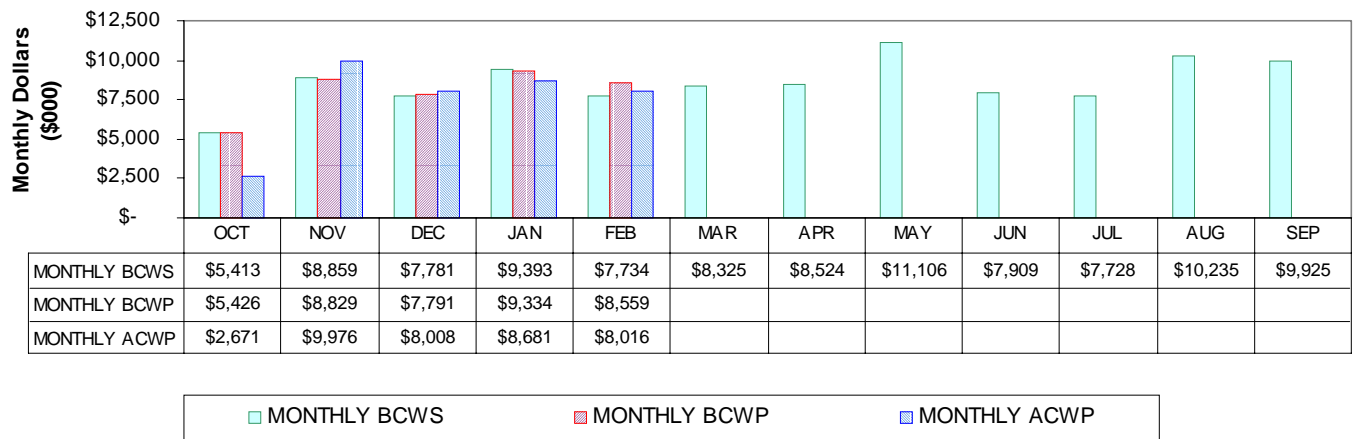
**Corrective Action:** No corrective action required.

## COST/SCHEDULE PERFORMANCE (MONTHLY AND FYTD)

### Fiscal Year to Date Performance Indices



### Monthly Performance Analysis



## FUNDS MANAGEMENT — FY 2001 TO DATE

### FUNDS VS SPENDING FORECAST (\$000)

Green

	Project Completion *			Post 2006 *			Line Items *		
	Funds	FYSF	Variance	Funds	FYSF	Variance	Funds	FYSF	Variance
<b>The Plateau</b>									
1.2 <b>Waste Management</b>									
TP02,WM03-05				\$ 99,757	\$ 96,117	\$ 3,640			
<b>Line Item</b>									
<b>Total Waste Mgt. Operating</b>				<b>\$ 99,757</b>	<b>\$ 96,117</b>	<b>\$ 3,640</b>			
<b>Total Waste Mgt. Line Item</b>									

\* Control Point

Above chart reflects FH Project structure, which divides certain PBS's between projects (e.g., WM05 – Waste Management and the River Corridor project). Consequently, these figures will differ from those shown elsewhere in this report (as generated in the PEM system). Additionally, \$3,245K of the variance is a legal commitment for the ATG Termination for Convenience Contract.

## ISSUES

### Technical Issues

**Issue:** Nothing to report at this time.

**Impacts:** None.

**Corrective Action:** None at this time.

### Regulatory Issues

**Report for Hanford Land Disposal Restrictions (LDR) for Mixed Wastes** - The CY 2000 LDR report is due to the regulators by June 30, 2001, in accordance with Tri-Party Agreement milestone M-26-01, "Annual Hanford Land Disposal Restrictions Report." Proposed enforceable dates have not yet been provided for the "Potential Mixed Waste Table," which are, as a result of the LDR settlement with Ecology, a required part of the LDR report. This table lists materials that are not yet waste, but could be expected to become (mixed) waste in the future. The enforceable dates are for filling data gaps on the materials as well as starting negotiations with the regulators on a path-forward towards treatment and/or disposal.

**Impacts:** Contractors cannot reasonably commit themselves to enforceable dates that are not a part of their contracts and potentially not funded.

**Corrective Action:** Meetings are being held to determine an acceptable solution.

**Dispute Re: Tri-Party Agreement Milestone M-91-12 "Initiate thermal treatment. At Least 600 m<sup>3</sup> provided for Treatment by December 2005"** — Ecology and RL are in disagreement as to the completion of this milestone. Ecology has been notified that RL has consequently invoked the Dispute Provision of the Tri-Party Agreement.

**Impacts:** Impacts are being assessed.

**Corrective Actions:** WMP is supporting RL preparation of the dispute response.

**TPA Milestone M-91-03 "Submit Hanford Site TRU/TRUM Waste Project Management Plan (PMP) to Ecology"** — Ecology has not approved completion of M-91-03. The adequacy of the M-91-03 "Project Management Plan for Transuranic and Transuranic Mixed Waste" is in dispute.

**Impacts:** There is no impact to work.

**Corrective Actions:** Discussions with Ecology on a proposed path forward for resolution of the dispute, via modifications to the Waste Management Strategic Plan are ongoing. Agreement in principle on the scope of the required modifications has been reached, and a draft modification is being prepared. Ecology has agreed to an extension to April 23, 2001 for continuation of dispute, to allow sufficient time for preparation and approval of the Strategic Plan modification.

**Revision 7 of the Hanford RCRA Permit (aka Modification E) Application** — Efforts continued to evaluate the permit and its impact on WRAP and CWC, and evaluation documents were shared with RL.

**Impacts:** There is the potential for substantial unplanned compliance costs and issues at WRAP and CWC.

**Corrective Actions:** A draft FH to RL recommendation letter on potential appeal is being reviewed by WMP, Environmental Services and Legal. These efforts will result in one of three possible outcomes: 1. An appeal of all portions of the permit specific to WRAP and CWC will be filed, resulting in a stay on the effective date of the permit for these facilities. The ultimate impact will depend on the outcome of the appeal process. 2. A decision not to appeal, which will result in substantial, unplanned compliance costs and issues. 3. A combination of 1 and 2, wherein only certain permit conditions are appealed while others go into effect. A decision on which way to go must be reached by the legally mandated deadline of March 30, 2001.

## External / DOE Issues and DOE Requests

**Issue:** Nothing to report.

**Impacts:** None at this time.

**Corrective Action:** None at this time.

## BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS (\$000)

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY00 COST IMPACT \$000	S C H	T E C H	DATE TO CCB	CCB APR'VD	RL APR'VD	CURRENT STATUS
WM-2001-013	1/17/2001	TRU Retrieval	\$921			2/20/2001	3/8/2001	NA	Approved
ADVANCE WORK AUTHORIZATIONS									



## KEY INTEGRATION ACTIVITIES

- **Spent Nuclear Fuel Support** — Preparing T Plant to receive Spent Nuclear Fuel K Basin sludge.
- **Liquid Effluents** — Continue support of UP-1 Groundwater treatment at the 200 Area Effluent Treatment Facility.
- **River Corridor Project (RCP) Support** — WMP continues to provide support to RCP for the removal of waste from the 324 and 327 buildings.
- **Nuclear Material Stabilization (NMS) Support** — Continuing support to the NMS Project for the removal of waste from the PFP.